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## C-A OPERATIONS PROCEDURES MANUAL

### ATTACHMENT

#### 4.56.akl RHIC Zone 4z1 Sweep Checklist

Text Pages 2 through 4

C-A-OPM Procedures in which this Attachment is used.		
4.56		

### Hand Processed Changes

<u>HPC No.</u>	<u>Date</u>	<u>Page Nos.</u>	<u>Initials</u>
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Approved: \_\_\_\_\_ ***Signature on File*** \_\_\_\_\_  
 Collider-Accelerator Department Chairman Date

P. Ingrassia, W. MacKay

## RHIC Zone 4z1 Sweep Checklist

Team leader (TL) \_\_\_\_\_ Sweeper#2 (S2) \_\_\_\_\_

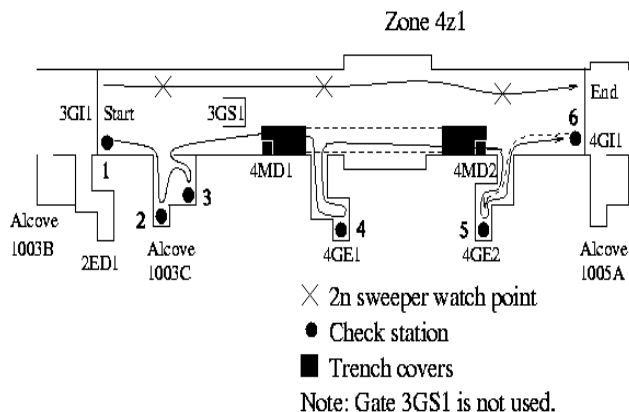
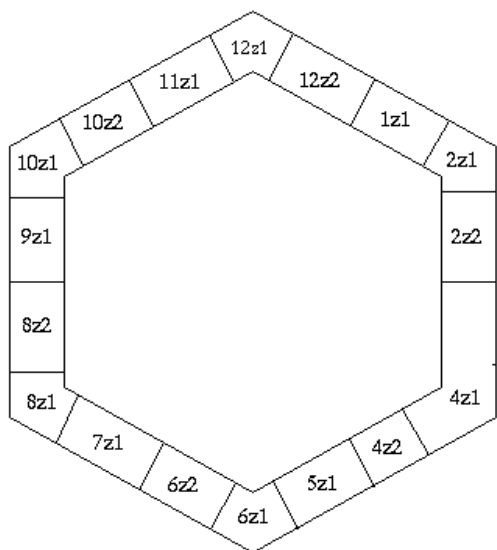
Time: \_\_\_\_\_ Date: \_\_\_\_\_

### Warning:

**IF** any workers are encountered during the sweep, **THEN** contact the OC to see if the sweep should be aborted. Workers shall leave the enclosure **WITH** the sweep team. **IF** the workers crash out of the enclosure **AND** do not exit with the sweep team, **THEN** the sweep shall be re-started.

### Prerequisites

- Two persons to perform the sweep,
- At least one sweeper not restricted from working at heights over five feet.
- RHIC Zone 4z1 Sweep Checklist (three pages)
- Required Tools: at least one flashlight,
- Chains and **APPROVED** padlocks (two each) for 4MD1 and 4MD2 trench gates.
- Two padlocks for Exhaust Fan Access Doors (may be in place)
- Walkie-talkies
- All Doors closed THEN 4z1 set to Controlled Access
- Keys: Sweep Reset key S/R011 (Team Leader), Controlled Access key CA010 (Sweeper#2), padlock key (RG184)
- RF Critical Devices are all safety off.



### Note:

References to positions in the tunnel are made using the RHIC magnets. The identity of the local magnet can be determined by looking up at the “lower” cable tray and reading the magnet name on a blue (B) or yellow (Y) label. For example, the convention used is: I05Q17 (Inside, Q17) or O-05Q17 (Outside, Q17). References are for inside locations and are visible only by the Team Leader

**CONTINUED ON REVERSE SIDE**

Check

- \_\_\_ 1 Sweep team enters zone 4z1 from gate 4GE2.
- \_\_\_ 2. TL opens 4GE2 gate by turning the CA010 key clockwise, in the Controlled Access key-switch while Operator in MCR presses simultaneous release for 4GE2.

Note

4MD1, and 4MD2 (trench) Gates must be reset before the 4z1 sweep may begin. IF both gates are padlocked THEN the trench need not be padlocked or searched.

- \_\_\_ 3 TL closes, chains, and padlocks the 4MD1 trench gate and resets the 4MD1 trench gate by turning the S/R011 key in the RESET keyswitch, on the 4MD1 panel, and verifies yellow RESET lamp is lighted.
- \_\_\_ 4 Sweep team goes to 4MD2.
- \_\_\_ 5 Sweeper trained to enter Class I confined space goes down the ladder, walks down the tunnel to the ladder at 4MD1, sweeps back to 4MD2 and climbs back up the ladder, closes and padlocks the trench gate.
- \_\_\_ 6 TL closes, chains, and padlocks the 4MD2 gate, then resets the 4MD2 trench gate by turning the S/R011 key in the RESET keyswitch, on the 4MD2 panel, and verifies yellow RESET lamp is lighted.
- \_\_\_ 7 S2 crosses under the accelerators and goes CCW to the outer 3GI1 gate while TL goes to the inner 3GI1 gate (Pass through the non-operational 3GS1 gate).
- \_\_\_ 8 TL resets 3GI1 by turning the S/R011 key in the RESET keyswitch at 3GI1-I
- \_\_\_ 9 TL observes RESET lamp light.
- \_\_\_ 10 TL STARTS SWEEP by turning the S/R011 key CW in the SWEEP key-switch on 3GI1-I (3CS1).
- \_\_\_ 11 TL observes AREA SECURED lamp blink once.
- \_\_\_ 12 Sweep team sweeps Clockwise (CW) around RHIC.
- \_\_\_ 13 TL stops to check the Exhaust Fan Vent Barrier at I03Q17
- \_\_\_ 14 Sweep team sweeps Clockwise (CW) around RHIC.
- \_\_\_ 15 S2 stands static watch at the electrical services alcove.
- \_\_\_ 16 TL enters the alcove and goes to the ladder at 3EL1.
- \_\_\_ 17 IF there is no mirror to verify no one is on the landing at the top of the ladder, THEN TL must climb the ladder to verify no one is on the landing and to check that 3EL1 is closed.
- \_\_\_ 18 TL resets gate 3EL1 using the S/R011 key in the Reset keyswitch at the bottom of the ladder.
- \_\_\_ 19. IF 3EL1 will not reset THEN TL climbs the ladder, closes 3EL1, then repeats step 18.
- \_\_\_ 20 TL observes RESET lamp lights after RESET.
- \_\_\_ 21 TL sets second check station (3CS2) by turning S/R011 key in the SWEEP keyswitch.
- \_\_\_ 22 TL observes AREA SECURED lamp blink once.
- \_\_\_ 23 TL goes to the far corner of the alcove to 3CS3.
- \_\_\_ 24 TL sets third check station (3CS3) by turning S/R011 key in the SWEEP keyswitch.
- \_\_\_ 25 TL observes AREA SECURED lamp blink once.
- \_\_\_ 26 TL checks inside EVERY rack and then sweeps out the alcove and joins S2.
- \_\_\_ 27 TL checks fan vent barrier is in place in vent above S2's head and overhead barrier is in place.
- \_\_\_ 28 Sweep team sweeps Clockwise (CW) around RHIC.
- \_\_\_ 29 Sweep Team stops to check the inner and outer Exhaust Fan Vent Barriers at I03DU7.
- \_\_\_ 30 Sweep Team sweeps Clockwise (CW) around RHIC.
- \_\_\_ 31 Sweep Team sweeps through the non-operational gates at 3GS1.
- \_\_\_ 32 Sweep Team checks behind and above electrical service panels at I-O3D5 including the overhead barrier.
- \_\_\_ 33 Sweep team sweeps Clockwise (CW) around RHIC.
- \_\_\_ 34 TL confirms padlock in place on Exhaust Fan Access Door (4XEF1) near I03Q3.
- \_\_\_ 35 S2 crosses under accelerators to stand static watch "inside" between O-03D0 and 3-DX

**CONTINUED ON NEXT PAGE**

- \_\_\_ 36 TL walks down 4GE1 labyrinth.
- \_\_\_ 37 TL resets 4GE1 by turning the S/R011 key in the RESET keyswitch on the 4GE1-I box.
- \_\_\_ 38 Observe the yellow RESET lamp is lighted.
- \_\_\_ 39 TL sets fourth check station (4XCS2) by turning S/R011 key in the SWEEP keyswitch.
- \_\_\_ 40 TL observes AREA SECURED lamp blink once.
- \_\_\_ 41 TL sweeps up the labyrinth and joins S2.
- \_\_\_ 42 S2 crosses under the accelerators to the "outside" of the tunnel.
- \_\_\_ 43 Sweep Team sweeps Clockwise around RHIC to the Vapor Barrier.
- \_\_\_ 44 S2 joins TL and both sweep through and close the vapor barrier door.
- \_\_\_ 45 TL goes down the stairs and stands static watch at a position where the area under the blocks supporting the "accelertors" can be seen.
- \_\_\_ 46 S2 crosses under the "accelerators" to the far side of the hall, climbs over the red pipe "fence" and searches under the raised floors using the flashlight.
- \_\_\_ 47 Sweep Team sweeps CW around the RHIC.
- \_\_\_ 48 S2 stands static watch opposite 4GE2 labyrinth.
- \_\_\_ 49 S2 confirms padlock is in place on Exhaust Fan Access Door at IC7B
- \_\_\_ 50 TL walks to 4GE2 gate.
- \_\_\_ 51 TL sets fifth check station (4XCS3) by turning S/R011 key in the SWEEP keyswitch.
- \_\_\_ 52 TL observes AREA SECURED lamp blink once.
- \_\_\_ 53 TL sweeps up labyrinth and joins S2
- \_\_\_ 54 Sweep Team sweeps CW around the RHIC
- \_\_\_ 55 Sweep Team checks behind and above the electrical panels at I4Q5D5 including the overhead barrier.
- \_\_\_ 56 Sweep Team sweeps CW around the RHIC
- \_\_\_ 57 Sweep Team stops to check the inner and outer Exhaust Fan Vent Barriers at I04D8.
- \_\_\_ 58 Sweep Team sweeps Clockwise (CW) around RHIC to 4GI1 gates.
- \_\_\_ 59 TL resets 4GI1 by turning the S/R011 key in the RESET keyswitch on the 4GI1-I box.  
(Note: 4GI1 may reset as part of the 4z2 sweep instead.)
- \_\_\_ 60 Observe the yellow RESET lamp is lighted.
- \_\_\_ 61 TL ends the sweep by setting the sixth check station (4XCS4) by turning S/R011 key in the SWEEP keyswitch.
- \_\_\_ 62 TL observes AREA SECURED lamp light amber.
- \_\_\_ 63 Sweep Team walks back to 4GE2.
- \_\_\_ 64 TL contacts MCR for simultaneous release for gate 4GE2.
- \_\_\_ 65 Sweep Team sweeps out 4z1 through 4GE2 door.
- \_\_\_ 66 TL contacts MCR and confirms that gates are reset and 4z1 zone indicates sweep is good.

**Note:**

IF the AREA SECURED, and GATE RESET lamps are not lit THEN contact MCR to verify sweep is good and gate(s) are reset.

- \_\_\_ 67 After returning keys to the RHIC key tree, TL RESETS both Remote Access Gates 4GE1 and 4GE2 from the RHIC PanelView at MCR\_2.
- \_\_\_ 68 After returning to MCR and verifying that all information is filled out completely, TL files the checklist in FY\_xx Sweep Log binder.